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ABSTRACT

An educational needs assessment is a process by which educational needs of students are identified and ranked in order of importance. The needs assessment process discussed in this publication has been designed for use at the district level. At this level school officials use needs assessment for deciding what changes to make in a course of study as well as meeting federal eligibility requirements. The word "need" is defined as the discrepancy between what a student knows and what he should know. This procedure explained in this publication will not be useful in determining institutional needs such as transportation needs, library facilities needs, or building needs. Student learning needs are the sole focus of the educational needs assessment procedure outlined. The definition of need should be interpreted to include both the affective and the psychomotor domains as well as the area of student cognitive learning. A recommended needs assessment procedure which can be used to identify and rank needs is also discussed. (DEP)

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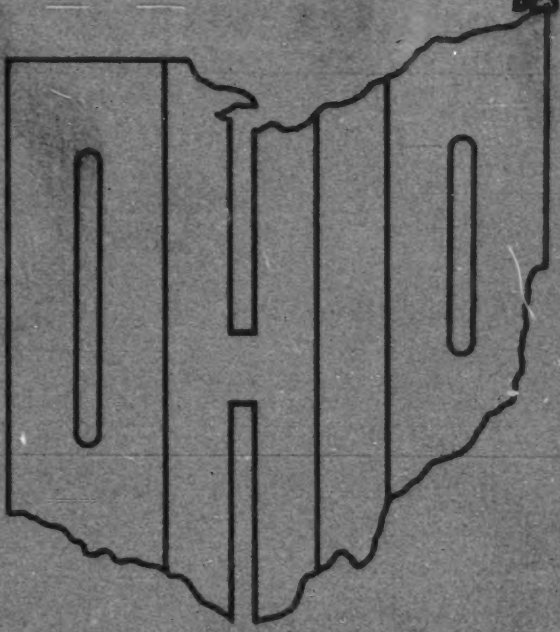

NEEDS ASSESSMENT GUIDELINES

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INTRODUCTION

Under Title III of the Elementary and Secondary Education Act of 1965, a school district must conduct a needs assessment before it can become eligible to receive Title III funds for innovative or exemplary projects. This publication has been developed to assist school district staff members in planning and conducting a needs assessment. A comprehensive needs assessment procedure is presented with instructions and suggestions for implementation.

The recommended procedures are based upon research findings. This research was concentrated in three major areas:

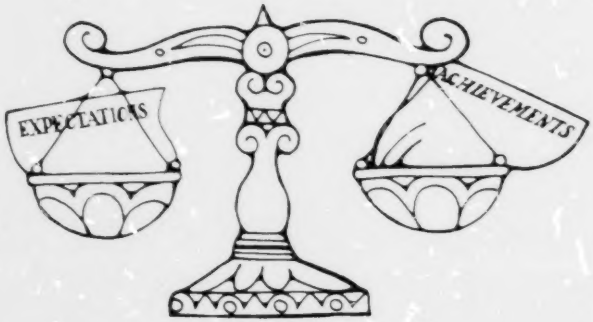
(1) a survey of the literature on needs assessment,

(2) a survey of the needs assessment practices in other states, and

(3) a survey of the current needs assessment practices and capabilities of Ohio school districts.

The procedures presented here not only provide a workable needs assessment for compliance with the eligibility requirements for federal funding under Title III, ESEA, but can also be useful in the areas of educational planning and school-community communications.

WHAT IS AN EDUCATIONAL NEEDS ASSESSMENT?



An educational needs assessment is a process by which educational needs of students are identified and ranked in order of importance. Ordinarily, a needs assessment seeks both subjective information (such as attitudes or perceptions of various groups) and objective information (such as achievement test scores) for the purpose of identifying and ranking educational needs.

Educational needs assessments can be conducted for numerous reasons and at various levels. At the national level a program called the National Assessment of Educational Progress provides information concerning educational achievements of students across the United States. At the state level, Department of Education staff members are often required to identify critical educational needs of the state. These educational needs then become targets for certain federally funded programs. At the district level, school officials might use a needs assessment for deciding what changes to make in a course of study as well as for meeting federal eligibility requirements. At the classroom level, the results of a needs assessment might be used to determine the important objectives of a course of instruction and to identify the current status of students with regard to these objectives.

The needs assessment process discussed in this publication has been designed for use at the district level. In this process, the word "need" is defined as the discrepancy (or difference) between what a student knows and what he should know. Thus, the needs that are identified and ranked are learning needs of students. The procedures explained in this publication will not be useful in determining institutional needs such as transportation needs, library facilities needs, or building needs. Student learning needs are the sole focus of the educational needs assessment procedure outlined in this publication.

A clear distinction can be made between student learning needs and institutional needs if institutional needs are considered to be methods of alleviating student learning needs. For example, a student learning need might be that fifth-grade students in a district are not achieving at expected levels in reading. The statement of need is based on the finding that fifth-grade reading achievements should be at a certain level and test results or other information indicate that student achievement is below this level. Thus, the discrepancy between the expected or desired level and the actual level of reading achievement is the need. In this example, it would not be accurate to state that the student need is for improved library facilities. The need is based upon the fact that students cannot read as well as they should. It may well be true that buying new books and providing additional library space will have an effect on reading achievement, but improving library facilities is a *method* for alleviating the student need and is *not* the actual student need.

The definition of need should be interpreted to include both the affective (dealing with attitudes and values) and the psychomotor (dealing with physical skills) domains as well as the area of student cognitive learning. In other words, it would be appropriate to call poor attitudes toward mathematics and poor handwriting skills actual student needs if a true discrepancy between actual and desired levels can be documented in these areas.

As stated earlier, an educational needs assessment should rank needs in order of importance as well as identify these needs. This ranking of needs becomes especially important when applying for Title III funding since these funds should be directed toward the most critical needs in a district. A recommended needs assessment procedure which can be used to identify and rank needs is discussed in the next section of this publication.

HOW TO CONDUCT A NEEDS ASSESSMENT

Research findings suggest the following points as criteria for the development of a needs assessment procedure for use at the district level. Such a procedure should:

- use the "discrepancy" approach to determine needs
- include a method for assigning priorities to identified needs
- obtain input from parents and other community members in addition to input from professional educators and students.
- begin with broad statements of educational goals
- assess needs in the affective and psychomotor domains as well as cognitive areas.
- involve the setting of expected levels of student achievement of goals
- use both objective and subjective data to determine needs

The needs assessment procedure shown in Figure 1 is intended to meet these criteria.

The procedure involves developing educational goal statements and conducting a survey of both school and community persons to determine their perceptions of the importance of these goals and student achievement. The survey results will indicate the top priority needs as perceived by the different groups involved. Desired levels of student achievement are determined in each of the top priority needs as perceived by the different groups involved. Desired levels of student achievement are determined in each of the top priority areas and actual student achievement is measured to see if these predetermined levels are being met. Information from the survey of perceived needs and from the measurement of student achievement is then used to rank educational needs in order of importance.

A NEEDS ASSESSMENT PROCEDURE

STEP ONE–	Establish a needs assessment committee
STEP TWO–	Prepare statements of educational goals
STEP THREE–	Conduct a survey to determine perceived educational needs
STEP FOUR–	Assign priorities to perceived educational needs
STEP FIVE–	Set desired levels of student achievement
STEP SIX–	Determine actual status of student achievement
STEP SEVEN–	Compare actual status with desired levels
STEP EIGHT–	Assign priorities to educational needs

FIGURE 1

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Each of the steps in this procedure will be discussed below and suggestions on how to complete the various tasks are provided.

STEP ONE-Establish a Needs Assessment Committee

Conducting a needs assessment requires considerable coordination. It is important that the overall procedures used to identify needs be well planned and carefully monitored. Moreover, it is extremely important that all those involved accept as valid both the identified needs and the process used to determine the needs. For these reasons, it is recommended that a needs assessment committee be appointed. This committee will perform specific duties as well as generally give direction to the entire needs assessment process.

The superintendent should be responsible for determining the size of the needs assessment committee as well as appointing its members. The size of the committee can vary, but the number of members should be kept small enough so that meetings will be "work and decision making" sessions and not just "talk" sessions. However, the committee should be large enough to involve representatives from as many groups in the district as is possible.

In naming committee members, the superintendent should consider representatives from the board of education, building administrators, teachers, counselors, parents, civic leaders, and students. The persons actually selected should be respected members of the community and should be knowledgeable about education and the educational process.

The superintendent or his designated representative should also be a member of the committee. A typical needs assessment committee might have this membership: superintendent, board of education member, elementary building principal, parent with children in elementary school, parent with children in secondary school, secondary school counselor, secondary school teacher, civic group representative, and a secondary school student.

If the superintendent decides to appoint a central office person to serve in his place, the representative should be one who is knowledgeable about needs assessment. The superintendent or his representative will be responsible for explaining why the needs assessment is being conducted, orienting the commitee members to the needs assessment process, and explaining the specific duties of the committee. (The members of the needs assessment committee should have an opportunity to review this publication before the needs assessment begins.)

The committee will be responsible for making decisions about the needs assessment strategy as well as performing specific duties during the implementation of the assessment. After members have become familiar with the needs assessment process and its purpose, they must make a decision about its parameters. Specifically, they should determine whether the assessment will be concentrated at the elementary, junior high, or high school level. It is possible to use a general strategy which considers all levels at one time, but more specific information can be obtained if a particular level is selected for assessment. In addition, it is probably best to keep the scope of the effort narrow during the first year.

Other specific duties of this committee are: prepare goal statements, rank perceived needs, set expected levels of student achievement, and rank real educational needs. Each of these duties will be explained in this publication. A timeline of needs assessment activities and recommended completion dates is included in Appendix A. It is important that the committee as a whole performs the duties listed above rather than just one person or a group of district administrators. Having the committee involved in the needs assessment should enhance the validity of the identified needs, and could determine whether or not these needs will be agreed upon by educators and community members in general.

The needs assessment committee will need assistance in performing its duties. A clerical person should be made available for typing, tabulating survey results, notifying members of meeting times, and taking notes at the meetings.

STEP TWO-Prepare Statements of Educational Goals

Before a needs assessment can be conducted, the exact areas must be determined. In step one, the needs assessment committee decided which level (elementary, junior high or high school) to focus on. It still remains, though, to choose specific areas. The needs assessment should not be narrowed to, for example, junior high school mathematics at this point, but the scope of the assessment should be narrowed from the total impact of education on the student to a workable size.

Narrowing the scope of the needs assessment can be accomplished most easily by focusing the assessment on the existing educational goals of the district. These goal statements are usually very general in nature but they should be adequate for narrowing the scope of the needs assessment. The committee will use the goal statements to generate sub-goals that describe educational outcomes for a student. The committee will use the sub-goals in developing a survey instrument (discussed later in this publication).

A sample of goal statements and appropriate sub-goal statements is shown in Figure 2. Three to five sub-goal statements should be developed for each goal that appears in the district philosophy. Although there is no required number of sub-goal statements, the total number should approach forty or fifty since a survey instrument will be developed on the basis of these sub-goals.

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SAMPLE GOALS AND SUB-GOALS

EDUCATIONAL GOAL 1 –	Education should help each student acquire basic skills and understandings in communication.
SUB-GOAL 1.1 –	Each student should be able to use effectively the basic skills in reading.
SUB-GOAL 1.2 –	Each student should be able to communicate effectively with others in writing.
SUB-GOAL 1.3 –	Each student should be able to communicate effectively in speaking.
EDUCATIONAL GOAL 2 –	Education should assist each student to acquire and develop understandings, attitudes, and skills necessary for responsible citizenship.
SUB-GOAL 2.1 –	Each student should use social courtesies and skills needed in human relations.
SUB-GOAL 2.2 –	Each student should exhibit concern for the welfare and dignity of all people.
SUB-GOAL 2.3 –	Each student should be able to work effectively with individuals and groups.

FIGURE 2

The final list of sub-goal statements should be subject to approval of the full needs assessment committee if they were developed by individual members or by some other assigned groups. The main criteria used to evaluate the list of sub-goal statements should be: (1) Is the list of statements comprehensive enough to include the areas deemed important? (2) Are the statements written in such a way that they will be understood by the people who are not professional educators? (3) Does each statement reflect a desirable outcome of the educational process for the level at which the needs assessment is being conducted?

If the district does not have prepared goal statements, goals from other districts could be obtained and examined by the board of education for relevance. If obtaining goals from other sources is not desirable, perhaps the needs assessment committee could develop goal statements for board approval.

STEP THREE-Conduct a Survey to Determine Perceived Educational Needs

Once the list of sub-goal statements has been prepared and approved by the needs assessment committee, plans are made for obtaining perceptions of various groups concerning the importance of each of these sub-goals and how well students in the district are achieving them. When these perceptions have been obtained, it will then be possible to identify perceived needs. Perceived needs are the discrepancies between levels of importance and achievement for each goal statement. (The needs identified in this manner are termed "perceived" needs since the needs are based on perceptions held by people and not on actual measurement of the status of students in regard to achieveing these sub-goals).

The major tasks to be completed are:

(1) Develop and print the survey instrument.

(2) Determine which groups will be asked to respond to the survey instrument.

(3) Determine the number of people from each group which will be asked to respond to the survey instrument.

(4) Draw a sample of people in each group (if necessary).

(5) Distribute the survey instruments.

(6) Collect the survey instruments.

The survey instrument should be developed from the list of sub-goals approved by the needs assessment committee. A sample format for this instrument is shown in Figure 3. Additional information concerning the development of the survey instrument is given in Appendix B.

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EDUCATIONAL NEEDS QUESTIONNAIRE

LEVELS OF IMPORTANCE						LEVELS OF ACHIEVEMENT				
Little importance	Minor importance	Medium importance	Major importance	Critical importance	Education should help each person to:	Very low degree	Low degree	Average degree	High degree	Very high degree
(1)	(2)	(3)	(4)	(5)	1. Use effectively the basic skills of reading.	(1)	(2)	(3)	(4)	(5)
(1)	(2)	(3)	(4)	(5)	2. Communicate effectively with others in writing.	(1)	(2)	(3)	(4)	(5)
(1)	(2)	(3)	(4)	(5)	3. Communicate effectively in speaking.	(1)	(2)	(3)	(4)	(5)
(1)	(2)	(3)	(4)	(5)	4. Use social courtesies and skills needed in human relations.	(1)	(2)	(3)	(4)	(5)
(1)	(2)	(3)	(4)	(5)	5. Exhibit concern for welfare and dignity of all people.	(1)	(2)	(3)	(4)	(5)
(1)	(2)	(3)	(4)	(5)	6. Work effectively with individuals and groups.	(1)	(2)	(3)	(4)	(5)
					etc.					

FIGURE 3

The survey instrument should be coded so that it will be possible to determine who (student, parent, teacher) completed an instrument. This can be done by numbering the instruments (for example, 1–300 for students, 301–600 for parents, etc.) or by using different colored sheets (for example, blue for students, yellow for parents, etc.).

A brief letter of explanation should accompany each instrument. The letter should explain the purpose of the survey, the level (elementary, junior high, or high school) at which the responses should be directed, and the method by which respondents were selected. This letter should be sent under the name of the district superintendent to give credibility to the survey.

As the survey instrument is being developed, the needs assessment committee should identify groups of people who should complete the instrument. Since input from a number of sources is desired, the respondents should include students, parents, community members, teachers, administrators, and board members. Additional groups from which respondents could be selected are non-certificated school personnel, members of community organizations, and representatives of business and industrial firms in the area.

The needs assessment committee must also decide on the number of persons who should be asked to respond to the survey instrument. Even if it were possible, it is not necessary to obtain responses from every eligible person in the groups mentioned above. Thus, unless the total district enrollment is very small (less then 1,000 students in K-12), it is advisable to select a sample of persons within each group. This does not mean that the instrument should be given only to a group of citizens who serve on a school advisory council or to a group of business leaders who meet regularly for a noon luncheon. While input from such groups might be desirable, perceptions of educational needs held by these groups would not necessarily be representative of community members in general. The sampling strategy should be to randomly select individuals to be surveyed. This should assure a representative group.

In a district with 350 high school students, it would be possible to have every high school student respond to the questionnaire. No special sampling strategy for students would be required. However, in a district with 1,000 or more high school students, use of a sampling strategy is recommended since this would minimize costs and reduce the work involved in analyzing the data.

In most districts, 300 to 500 students would be an adequate sample to represent the entire student population and to generate data which would be statistically reliable. In larger districts, the sampling strategy should be to select randomly about 500 students.

Various techniques are available for selecting a sample of students. For example, in selecting 500 students from a high school with an enrollment of 2,500 an acceptable method would be to list the names alphabetically and assign each name a number from 1 to 2,500. Five hundred numbers between 1 and 2,500 could then be selected by using a random number table, and the students corresponding to each number selected would represent the sample (A random number table and instructions for its use are shown in Appendix C). However, in a district with 10,000 high school students, a more workable sampling strategy would be to randomly select high school homerooms and have all the students in those homerooms complete the instrument. For example, suppose that in the district with 10,000 high school students there are 400 homerooms. A sample of approximately 500 students could be drawn by using a random number table to select 20 homerooms and including every student in these homerooms in the sample. This method of selecting students by first selecting homerooms should not be used unless students are somewhat randomly assigned to home-

rooms. If, for example, students are assigned to homerooms in which they have their first period class, the students themselves should be selected randomly, not the homerooms.

The basic instructions given above would also apply to the sampling strategy used in selecting parents. Names of parents could be selected randomly from school records using the table of random numbers. In districts with large enrollments, parents of students in homerooms which were randomly drawn could be selected to respond to the questionnaire.

There are other sampling strategies which could be used as alternatives to random sampling, but the methods discussed above are relatively easy to use and should result in a representative sample.

Selecting a sample of community members who do not have students in school will be difficult because it will not be easy to obtain a list of names. In small districts, a list of names could be obtained by comparing lists of names on property tax rolls with names of parents having children in school. A random sample could then be drawn from the persons on the tax rolls who were not identified as having children in school. An alternative to this procedure would be to have each parent who responds to the survey instrument provide the name and address of a neighbor who does not have a child in school. The persons identified in this manner could be asked to respond to the survey instrument. In some cases, it may be possible to simply select names from a telephone book and compare this list of names with names of parents with children in school.

With the exception of large districts, it would not be necessary to draw a sample of individuals from teachers, administrators and board members. In most districts with total student enrollment under 20,000, each teacher and each administrator who works at the level of concern in the needs assessment (elementary, junior high, or high school) can respond to the survey instrument. In larger districts, a sample of from 300 to 500 teachers could be drawn using the table of random numbers as discussed earlier. It should be possible, however, to have all administrators and all board members complete the instrument.

The survey can be conducted in a number of ways once the sampling has been completed. Students, teachers, and administrators can complete the instrument during school time. This holds down the costs of the survey and should ensure a sizeable rate of response. The instrument could be mailed, with a return envelope enclosed, to parents having children in school or it could be sent home with the students. While both of these methods are acceptable and inexpensive, the return rate

may not be very high. An alternative approach which should ensure a higher rate of return is to have the instruments delivered personally to each respondent and collected later at a specified time. This is also a good method to use in distributing instruments to community members who do not have children in school. The distribution and collection of the instruments could be performed by high school students, PTA members, or other groups as a money-making project for their organization.

STEP FOUR - Assign Priorities to Perceived Educational Needs

The survey instruments should be categorized by groups (parents, teachers, etc.) as they are returned. Once the collection process has been completed, the analysis of the responses can begin. This analysis determines the discrepancies between levels of importance and achievement for each goal statement for each group. A sample worksheet (with instructions) that can be used to tabulate responses is shown in Appendix D. Use of this worksheet will not be necessary if the analysis is being handled by computer since cards can be punched directly from the instruments. However, if use of a computer is not feasible, the worksheet should prove helpful in performing the analysis. The actual work involved is not complicated although it is time consuming.

The results of the tabulation and the analysis will be a discrepancy value for each sub-goal statement for each group. This discrepancy value, which will be the average discrepancy value for each group, will indicate the difference between importance and achievement for each

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goal statement. Most discrepancy values will probably be positive numbers although it is possible to obtain zero or negative number discrepancies. A positive discrepancy should be interpreted as an indication that people believe students are not achieving a certain sub-goal as well as they should be. A zero discrepancy indicates that the students are achieving satisfactorily, while a negative number discrepancy indicates that students are actually achieving at a higher level than is expected.

The discrepancy values should be compiled into a report for the needs assessment committee. A sample format for such a report is shown in Figure 4. These discrepancy values, determined from the results of the survey, will aid in determining perceptions of needs but will not necessarily serve as a valid indicator that a given need actually exists. A different type of discrepancy value which gives more valid information will be used later in this needs assessment procedure.

SAMPLE NEEDS ASSESSMENT REPORT

	DISCREPANCY VALUES				
ITEM	STUDENTS	PARENTS	TEACHERS	ADMINISTRATORS	BOARD MEMBERS
1. Use effectively the basic skills in reading	0.93	1.65	1.06	1.29	0.97
2. Communicate effectively with others in writing	0.87	0.59	0.73	0.95	0.65
3. Communicate effectively in speaking	0.53	1.21	1.54	0.53	0.87
4. Use social courtesies and skills	-0.19	0.74	0.82	0.91	0.76
5. Exhibit concern for welfare and dignity of all people	0.24	0.56	0.41	0.88	0.68

FIGURE 4

The needs assessment committee examines the report and determines the top priority perceived needs for further investigation. Sub-goal statements having many small positive, zero, or negative number discrepancies (hence, not perceived as needs) can easily be ruled out. However, there will probably be many goal statements remaining after this initial "weeding out" process. The needs assessment committee will have to reach agreement on a procedure for determining the top priority needs since the analysis procedure and the report are not designed to do this.

There are different methods by which the needs assessment committee can assign priorities to the perceived needs. One method is to add the discrepancy values obtained from each group of respondents for each goal statement; the largest values will then indicate top prior-

ity perceived needs. Use of this procedure may not be desirable, however, because it assumes that the opinions of each group are of equal importance. The needs assessment committee may or may not accept this equal weighting procedure as the most valid. An alternative to simply adding the discrepancies across groups would be to weight these values *according to the wishes of the committee* before adding. For example, suppose the committee members decided that the opinions of board members and administrators should count twice as much as the opinions of any other groups (individual groups, not the remaining groups as a whole). In this case, the discrepancy value for item number 1 in Figure 4 could be obtained as shown in Figure 5.

SAMPLE WEIGHTING SYSTEM

	WEIGHT	X	DISCREPANCY		
Students	1	X	0.93	=	0.93
Parents	1	X	1.65	=	1.65
Teachers	1	X	1.06	=	1.06
Administrators	2	X	1.29	=	2.58
Board Members	2	X	0.97	=	1.94
	n=7		Total	=	8.16

Weighted discrepancy value = 8.16 ÷ 7 = 1.17

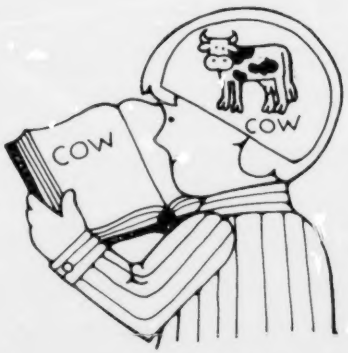
FIGURE 5

When this weighted discrepancy value has been calculated for each sub-goal statement, the perceived needs can be ranked from largest to smallest by the size of this weighted discrepancy value.

The top priority perceived needs will be those sub-goal statements having the largest weighted discrepancy values. However, this list of prioritized perceived needs is not the terminal point of a needs assessment. The perceived needs are based solely on perceptions or opinions that persons hold toward education. The perceptions of importance gathered in the survey must be accepted as valid information, but the perceptions of the levels of student achievement on various goals may not be accurate. The perceptions of people concerning student achievement could easily be biased by an isolated incident or could be inaccurate because of a lack of information about the schools. Since perceptions of needs may not be accurate, there should be some objective data which documents the actual needs. The top priority perceived needs then become the areas in which to concentrate further assessment efforts.

The actual number of top priority perceived needs to be included in further assessment efforts should be determined by the needs assessment committee. Some factors to consider when making decisions on the number of areas to be assessed are: (1) the size of weighted discrepancy values, (2) the relative costs of assessments in each area, (3) the relative ease of conducting assessments in each area, and (4) the amount of time available for assessment. Because of these factors and others, between five and ten of the top priority perceived need areas should be selected for further assessment.

STEP FIVE - Set Desired Levels of Student Achievement On Top Priority Perceived Needs



An educational need has been defined as the difference or discrepancy between what a student knows and what he should know. This definition implies that there must be a desired level or a standard set for what a student should know and then it must be determined whether or not the student has attained this standard. Setting a standard for student achievement should be the responsibility of the needs assessment committee although information from teachers, administrators, and persons trained in educational measurement would probably be desirable before the committee makes its final decision on such standards.

Standards of achievement need to be set for each of the top priority perceived needs selected earlier by the needs assessment committee. These standards may take different forms. For example, a standard may be set in terms of (1) national or statewide norms, (2) achievement levels in similar districts in the area, (3) achievement of specified performance objectives, and (4) desired learner behaviors in non-cognitive

areas. These standards should represent a desired state of achievement for all students at a particular level in the district's program. It is not necessary to set standards for each student or for each class in the district.

Some examples of standards of desired levels of student achievement, using each of the four forms discussed above, are shown below:

Form 1 - Every student in the fifth grade should score at or above the national norm on the arithmetic portion of the Iowa Test of Basic Skills.

Form 2 - The achievement level of sixth-grade students in our district on the mathematics portion of the Ohio Survey Test should be equal to or above the achievement level of sixth-grade students in district X.

Form 3 - Ninety percent of the fifth-grade students should perform correctly on 18 of 20 items of a basic mathematical skills test designed by a group of fifth-grade teachers in our district.

Form 4 - Eighty percent of the sixth-grade students will have a favorable attitude toward mathematics as measured by the Kiner Scale of Attitudes Toward Mathematics.

These standards are presented only as samples and do not include all possible forms in which standards could be written.

Some important points to consider when developing these statements of desired standards are:

(1) The standard should be based on a reasonable expectation of learner achievement. For example, a standard such as "All sixth-grade students will achieve at or above the 90th percentile on the California Achievement Test," is obviously not very realistic for most districts.

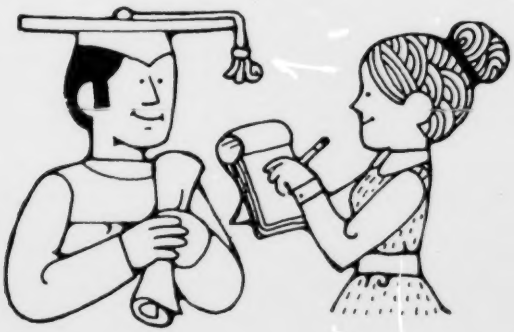
(2) The standard should be based on some logical relationship between present student performance and future situations for which the student must be prepared. For example, if it is known that a seventh-grade reading level is necessary for a student to do successful work in high school, then a logical standard would be that "All high school freshmen should read at or above the seventh grade level as measured by the Metropolitan Reading Test."

(3) The standard should be written so that it allows for a determination of whether or not the standard has been met. For example, a standard such as, "Sophmore science students will do better than last year's sophomore science students," would not be acceptable because the word "better" is open to many different interpretations. It would not be possible to determine whether or not this standard was met without having a clear definition of what was meant by "better."

(4) The standard should actually be set before the measurements are taken. This may not always be possible, but the identified need would be more readily accepted if this can be done.

Setting these standards should be the responsibility of the needs assessment committee. However, it seems likely that the opinions of teachers and administrators would be desired before final decisions are made on these standards.

STEP SIX - Ascertain Actual Status of Student Achievement



The methods used for accomplishing this step will usually be determined by the nature of the standard used in the statements. The methods could involve buying and using standardized tests, having teachers set definite performance objectives for a course of instruction and then using a criterion-referenced test to see if students have met these objectives, or using various unobtrusive measures to determine student performance or behavior. In many cases, collecting the necessary information on student achievement may not be an extra burden because the information is often collected during the school year.

If existing data or data that are normally acquired during the school year are not adequate, a number of sources can be used to provide assistance in collecting the necessary information. A large number of standardized tests are discussed in Buros' *Mental Measurement Yearbook*[1] and in *Measuring Human Behavior*[2]. If criterion-referenced tests are desired, they can be developed by district staff members or purchased from various educational organizations. Many educational organizations maintain files of performance objectives and related test items which may be purchased.

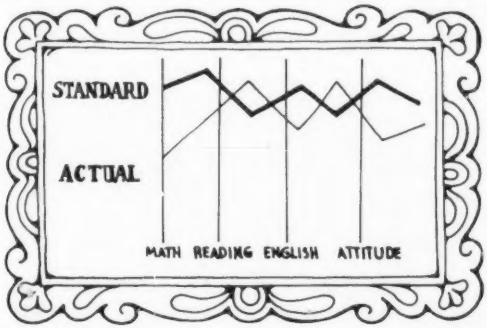
If formal testing in addition to the regular testing program is required, it is quite possible that adequate information can be collected by giving the test to a sample of students, rather than testing every student. It is possible to use a sample of students because you are seeking information about the average student achievement level rather than specific information about each student. Sampling procedures similar to those discussed earlier for conducting a survey would be appropriate here. Using these sampling procedures will help to hold down the costs of the testing program.

In situations where formal testing results will not provide adequate information (for example, when the perceived need being measured is in a noncognitive area), use should be made of any pertinent data from school records, follow-up studies of school graduates, dropout studies and so forth.

[1]**Mental Measurement Yearbook**, Buros, Oscar K., Editor; Gryphon Press, Highland Park, New Jersey, 1972.

[2]**Measuring Human Behavior**, Lake, Dale G., Miles, Matthew B.; and Earle Ralph B. Jr., editors; Teachers College Press, Columbia University, 1973.

STEP SEVEN - Compare Actual Status with Desired Levels of Student Achievement



If the desired standards for student achievement have been properly written, it should be possible to make direct comparisons between these statements and the measurement of student achievement to determine the discrepancy between these two states. (Please note that these discrepancies are not related to the discrepancy values discussed earlier in step four.) Some *sample* comparisons are shown below:

EXAMPLE ONE

Desired Status - Every eighth-grade student in our district should be able to read at or above a sixth-grade level as measured by the Metropolitan Achievement Test.

Actual Status - The analysis of the results obtained by administering the Metropolitan Achievement Test to all eighth-grade students in our district indicates that seventy-three percent of the eighth-grade students are reading at or above the sixth-grade level.

Discrepancy - 100% (Desired) – 73% (Actual) = 27%

EXAMPLE TWO

Desired Status - Ninety percent of the ninth-grade students should score at or above the national norm on the Stanford High School Science Test.

Actual Status - The analysis of the results obtained by administering the Stanford High School Science Test to ninth-grade students indicates that only sixty-two percent of these students scored at or above the national norm.

Discrepancy - 90% (Desired) – 62% (Actual) = 28%

EXAMPLE THREE

Desired Status - At the end of the third grade, ninety percent of the students would be able to answer correctly eighty percent of the questions on a locally developed test of basic math skills.

Actual Status - Eighty-four percent of the third grade students were able to answer correctly eighty percent of the questions on a math skills test developed by a committee of third-grade teachers in our district.

Discrepancy - 90% (Desired) – 84% (Actual) = 6%

When it is not possible to obtain direct information needed to determine whether or not a desired level of student achievement has been reached (this could often be the case when the perceived need is in the affective domain), an attempt should be made to identify as many indirect indicators of actual status as possible. An example using indirect indicators is shown below.

EXAMPLE FOUR

Desired Status - All students will demonstrate concern for the welfare and dignity of all people.

Actual Status - On a locally developed test, fifty-three percent of all eleventh-graders indicated that they would be willing to live next door to a person of another race, thirty-seven percent indicated that they would continue to associate with a friend whose father had been sent to jail, and twenty-two percent indicated they would be willing to perform volunteer work in a rest home for the aged.

STEP EIGHT-Assign Priorities to Educational Needs

The needs assessment committee should list the educational needs in order of importance after studying achievement. The needs should not be ranked solely on the size of the discrepancy between the desired and actual status of student achievement. Among the other factors to be considered when preparing a ranked list of needs are:

(1) the ranking given each need by each group involved in the survey

(2) the logic behind the statement of desired status

(3) the relationship between the statement of desired status and the actual status of student achievement

(4) the validity and reliability of any standardized tests which were used

(5) the validity of any sampling strategy used to determine actual status

There is no "magic formula" for determining the top priority needs from this information. The final list of ranked needs should be determined by discussions among committee members after consideration of the factors above. An alternative strategy would be to let each member assign points to each need (for example, use a scale of from 1 = low priority to 5 = high priority). The needs could then be ranked according to the total number of points assigned to each need.

APPENDIX A

NEEDS ASSESSMENT ACTIVITIES

A list of the major activities in the needs assessment process is shown below. The recommended completion dates have been arranged to coincide with the ordinary school year. Since the needs assessment procedure could begin at any time during the year, the recommended completion dates may be useful only in providing estimates of the time to be allotted.

ACTIVITY	PERSONS RESPONSIBLE	RECOMMENDED COMPLETION DATES
1. Appoint a needs assessment committee	Superintendent	August 15
2. Conduct orientation meeting for needs assessment committee members	Superintendent	September 1
Purpose:		
a. Explain purpose of needs assessment	Superintendent	
b. Discuss educational goals of district	Superintendent	
c. Determine level to be assessed	Needs Assessment Committee	
3. Conduct needs assessment committee meeting	Superintendent	September 15
Purpose:		
a. Determine educational goals	Needs Assessment Committee	
b. Arrange for writing of sub-goal statements	Needs Assessment Committee	
c. Select groups to be surveyed	Needs Assessment Committee	
d. Discuss weighting procedures to be used in data analysis of survey results	Superintendent	

ACTIVITY	PERSONS RESPONSIBLE	RECOMMENDED COMPLETION DATES
4. Draw sample for survey instrument	Superintendent/ Clerical	October 1
5. Develop and distribute survey instruments	Superintendent/ Clerical	October 15
6. Return survey instruments	Survey respondents	November 15
7. Analyze survey results	Clerical	November 25
8. Prepare summary report	Superintendent/ Clerical	December 1
9. Assign priorities to perceived educational needs	Needs Assessment Committee	December 5
10. Set desired levels of student achievement	Needs Assessment Committee	December 20
11. Determine measurement instrument to be used	Needs Assessment Committee, teachers/subject matter specialists	December 20
12. Order measurement instruments	Superintendent/ Clerical	January 5
13. Administer measurement instruments	Teaching Staff	February 1—May 1
14. Compare actual status with desired levels	Needs Assessment Committee	May 15
15. Assign priorities to educational needs	Needs Assessment Committee	May 15

APPENDIX B

DEVELOPMENT OF A SURVEY INSTRUMENT

The suggested format for the survey instrument was shown earlier in this publication in Figure 3. The survey instrument should follow this format since a discrepancy value can be determined from perceptions on levels of importance and levels of achievement for each item on the instrument. However, use of this format requires that the survey respondents be told very explicitly how to mark their responses on the instrument. A sample set of directions is shown on page 25. This set of directions (or a similar set) should be attached to the front of the survey instrument.

The items on the survey instrument will be made up of the sub-goal statements discussed in Step 2 of this publication. The following suggestions are given to guide the development and use of these sub-goal statements:

(1) Each sub-goal statement should relate to one of the goals established by the needs assessment committee or by the board of education.

(2) The level of specificity of a sub-goal statement should be about midway between the low level of specificity in a goal statement and the high level of specificity in a performance objective.

(3) Each sub-goal statement should deal with only one activity. For example, do not combine basic skills in math and proper attitudes toward learning in a single sub-goal statement.

(4) Each sub-goal statement should be as brief as possible.

(5) The use of ambiguous terms and phrases should be avoided.

(6) The positioning of sub-goal statements on the instrument should be determined somewhat randomly. For example, if there are three sub-goals related to mathematics, these sub-goals should not be listed together but should be separated from each other.

(7) The number of sub-goals used on the survey instrument should not go above fifty.

When the format of the instrument and the sub-goal statements have been agreed upon, the instrument is ready for final typing and reproduction. Since the same instrument will be used for all the groups surveyed, some coding system should be used to enable the person who analyzes

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the data to identify the group to which a particular respondent belongs. An easy way to code the instruments is to use different colors of paper for the instruments given to different groups. For example, all instruments give to parents could be blue, instruments given to students could be yellow, and so forth.

If the instruments are mailed to various persons, a return date and a return address should be stated on the instrument itself or on the accompanying letter.

SAMPLE DIRECTIONS FOR SURVEY INSTRUMENT

Directions: Attached are forty statements of educational goals. To the left of each goal statement you are to indicate your opinion of the *importance of each goal being achieved by students* in this district. Use the following key to indicate the importance you attach to each goal.

1 – This goal is of *little or no* importance
2 – This goal is of *minor* importance
3 – This goal is of *medium* importance
4 – This goal is of *major* importance
5 – This goal is of *critical* importance

To the right of each goal you are to indicate your opinion of the *degree to which students in this district are achieving* this goal. Use the following key to indicate your opinion.

1 – This goal is being achieved to a *very low* degree
2 – This goal is being achieved to a *low* degree
3 – This goal is being achieved to an *average* degree
4 – This goal is being achieved to a *high* degree
5 – This goal is being achieved to a *very high* degree

Shade the number that corresponds with your opinion. Make sure that you shade a number for both the importance of each goal and the degree of achievement of each goal.

APPENDIX C
TABLE OF RANDOM NUMBERS

Shown on page 28 is a table of random numbers. Directions for using this table of random numbers are:

Step 1 - Determine the number (N) in the population from which you are drawing a sample. If this number is less than 100, it will be necessary to select two-digit numbers from the table. If this number is between 100 and 999 inclusive, it will be necessary to select a three-digit number from the table.

Step 2 - Assign each person (or item) in the population a number from 1 to N (with each number being used only once).

Step 3 - Determine the number in the sample. One random number should be selected from the table for each person (or item) in the sample.

Step 4 - Randomly select a starting point within the table of random numbers. The starting point can be determined in a number of different ways, but a very common method is to close your eyes and touch the table with a pencil. The number closest to the point of contact is the first number selected.

Step 5 - Select other numbers by moving vertically, horizontally, or diagonally from the starting point.

EXAMPLE

Suppose it is necessary to draw a sample of 230 students from the total high school enrollment of 963 students.

Step 1 - The population contains 963 students. Thus, it is necessary to select three-digit numbers from the table.

Step 2 - Each high school student will be assigned a number from 1 to 963 (this could be assigned alphabetically).

Step 3 - The sample size is 230. Thus, it will be necessary to select 230 three-digit numbers from the table.

Step 4 - The starting point selected is the 0 shown in Row 35, Column 14 ($\frac{1}{4}$) of the table (column numbers are read vertically). The first three digit number selected is 012 which appears in Row 35, Column 14, 15, and 16.

Step 5 - It has been decided to move down vertically from the number 012. The next five numbers selected are 643, 152, 279, 928, and 467 (the number 968 was not used since it exceeds the number in the population). This process will continue until the bottom row of numbers is reached (the number in the bottom row is 858). At this point it was decided to move horizontally to Row 50, Columns 17, 18, and 19 and move up vertically from this point. The next five numbers selected are 441, 781, 060, 300, 734. This process is continued until two hundred thirty numbers have been selected.

RANDOM NUMBER TABLE

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ROW	Column Number									
	00000 12345	00001 67890	11111 12345	11112 67890	22222 12345	22223 67890	33333 12345	33334 67890	44444 12345	44445 67890
01	94422	14340	13431	59573	11339	75031	93644	17109	82784	98023
02	82010	54784	89366	91913	95495	95000	08789	16999	66767	77826
03	30099	56198	38372	04358	44531	81493	05319	46823	71953	25178
04	25020	52579	17904	37122	29206	00596	29880	71273	03726	78280
05	93298	92398	81488	08400	83164	14710	23208	64603	39106	18684
06	27342	64726	22831	14957	14957	56636	49043	61214	30683	93687
07	86903	93439	48997	68805	82624	17754	22971	66754	69489	42883
08	36107	17001	49609	26844	48884	55665	81360	40297	85348	98230
09	38281	33624	17122	91173	46596	81691	78481	83016	57076	76837
10	73228	75179	82409	49895	01764	94722	44648	77466	89173	46059
11	53152	71919	30016	33398	95991	36420	99235	72272	40711	21737
12	19976	52019	90996	93591	41421	56031	85804	18044	76493	08691
13	95647	17372	99453	96047	92280	01171	86352	73049	86253	04300
14	92841	28218	34791	04089	17508	23831	67423	43822	14211	91760
15	78439	56566	79840	83258	69690	58715	33648	53454	43872	51980
16	01719	94541	01686	99137	17981	93155	34122	46198	25486	48841
17	46729	27637	20028	78690	76298	06724	07982	34181	91029	15816
18	66479	75258	90939	81889	97517	90053	02693	14535	44829	06585
19	90055	55346	19171	43427	36008	35664	92099	24915	39667	22398
20	59197	85894	85295	31642	19210	01814	89685	13158	85809	16368
21	78643	72224	87958	17795	77942	38569	31335	88430	15775	54385
22	24245	45792	01005	09709	66511	00611	64921	88861	28312	03536
23	49096	69416	82383	30916	36122	81470	15771	16074	35080	13233
24	99186	86659	63937	39479	38766	51775	07269	94046	45586	23767
25	10892	78787	49444	92128	73953	42088	33791	52165	28498	92735
26	14276	82861	67459	13443	08350	16951	05118	68581	40359	25778
27	95281	38833	53292	46481	69960	69199	22526	76500	15818	45670
28	81625	93718	30074	63692	48820	65419	32431	35176	87567	22631
29	08155	96562	06518	41266	55701	44789	37927	12078	29980	16118
30	71354	15892	72301	76199	53826	54349	63408	64389	25459	50957
31	07823	64723	59485	33289	91495	36605	50956	12101	87037	53308
32	39674	77349	75855	34857	50208	23747	72264	63655	40992	81250
33	19694	81765	15978	03679	82888	07553	20104	68068	27505	40822
34	74869	31365	30780	00165	92655	75145	92842	77365	19779	84671
35	90391	90521	16201	29952	93176	66486	16416	83793	40906	66622
36	24320	29131	73064	33330	76563	72676	66939	72287	44089	06196
37	96915	06269	89096	83396	16187	66682	66597	41884	00648	09893
38	49508	43761	15915	29688	50225	81126	13677	90951	31105	03118
39	19329	89543	14227	91433	83588	10775	33457	22670	14893	00355
40	91623	62350	06092	84229	04957	50716	84990	43228	22881	06849
41	90654	14463	62046	71024	16538	51675	26922	86010	65535	15497
42	90857	77682	89695	07456	84473	44185	24825	15565	99327	65565
43	94152	85474	98071	90088	70208	32918	30289	58957	97073	55530
44	58780	64443	13348	76880	88565	48326	93955	55960	71697	85928
45	72995	46736	56315	23237	08339	32609	52659	80870	95274	85138
46	39626	46543	83367	57342	22114	96019	54392	02492	57925	59457
47	57262	24648	50615	93007	10875	16984	11927	12858	26782	61802
48	65949	69695	32014	60603	24438	05228	18067	40829	01766	31146
49	67474	96409	77055	97818	62605	50964	96216	67175	64184	73319
50	24082	71518	49885	84416	39218	82841	12380	57480	84143	51388

APPENDIX D

SAMPLE WORKSHEET FOR DATA ANALYSIS

Shown on page 30 is a sample worksheet for use in analyzing the results of the instrument used in the survey. Instructions for using this worksheet are discussed below.

Step 1 - Before using this worksheet, separate the completed survey instruments by groups. All the instruments completed by students, for example, should be analyzed independently of instruments completed by persons in other groups.

Step 2 - Since the worksheet has space for only fifteen items and fifteen respondents, it will be necessary to reproduce copies of worksheet. For example, it will take 60 worksheets to record responses of 300 students on a 45-item questionnaire.

Step 3 - The worksheet is so designed that each row represents the information from a different respondent. For the first survey instrument recorded, mark the number indicating the level of importance for the first item under I in row 1, column 1. The responses for item 2 go under row 1, column 2, etc. Mark the number indicating the level of achievement for the first item under A in row 1, column 1.

The second instrument recorded will fill row 2, third instrument, row 3, etc. When all fifteen rows are filled, add the numbers in each column and place the total at the bottom of each column. (Do not compute the quotient or discrepancy).

Step 4 - When each survey instrument has been recorded on a worksheet and the column totals have been added for each worksheet, add the totals for each column on each of the worksheets and put the grand total for each column on the row for total on the last page of the worksheets.

Step 5 - Divide each total by the number of respondents and place the quotient in the row marked quotient on the last page of worksheets.

Step 6 - Subtract the quotient value under A from the quotient value under I for each column. This difference represents the discrepancy value for that item and should be placed in the row marked discrepancy.

SAMPLE WORKSHEET

ITEM NUMBER

Respondent Number	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15	
	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A
1																														
2																														
3																														
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TOTAL																														
QUOTIENT																														
DISCREPANCY																														

APPENDIX E

ASSISTANCE WITH NEEDS ASSESSMENT ACTIVITIES

Assistance with many of the needs assessment activities discussed in this publication can be obtained by contacting various universities and other educational research organizations. These organizations should be contacted directly for information concerning costs and procedures involved in obtaining assistance with developing goal statements, performing data analysis, drawing a sample, and so forth.